

IM3080 Design and Innovation Project (AY2023/24 Semester 1)

Individual Report

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Group No: 5

Project Title: CLUTCH (Mobile Application)

Contributions to the Project (1 page)

- Lead a team of 9 people in creating a car auction mobile application.
- Manage and divide the team into 3 subgroups, namely: Design, Frontend, and Backend.
- Lead every week's meeting and update everyone's progress.
- Provide incremental small checkpoints every week for each of the member.
- Prepare the slides for weekly updates.
- Teach the members in using Figma, Git, and GitHub.
- Lead the discussion in requirement and design analysis (before splitting the task).
- Creating git branches for every of the member.
- Merging the git branches once they have pushed their progress.
- Resolve merge conflicts when integrating between branches.
- Reorganize unnecessary function, components, and files created by other members.
- Integrating the Frontend and Backend of the code.
- Implement asynchronous JavaScript (await and fetch) to call HTTP request (GET, POST, and PUT) via Application Programming Interface (API).
- Add and polish the Frontend code.
- Create new API and fix broken API in the backend.
- Lead the discussion in creating the final report.
- Supervising the progress of each of the member.
- Ask and answers questions with each of the member.

Reflection on Learning Outcome Attainment

Reflect on your experience during your project and the achievements you have relating to at least two of the points below:

- (a) Engineering knowledge
- (b) Problem Analysis
- (c) Investigation
- (d) Design/development of Solutions
- (e) Modern Tool Usage
- (f) The Engineer and Society
- (g) Environment and Sustainability
- (h) Ethics
- (i) Individual and Team Work
- (j) Communication
- (k) Project Management and Finance
- (l) Lifelong Learning

Point 1: Engineering Knowledge

It was an adventurous 14 weeks in DIP. When I started this project, I have never touched on React Native, Express, and MongoDB. Everything is very new for me. However, all the challenges can be overcome by my huge passion in learning programming. As time goes by, I am become much more familiar in React Native. I learned Stack Navigator, Stack Screen, View, Text, Tab, and many more new components which only can be found in React Native. I also just learned about MongoDB Database and Express for backend. I learned how to create a GET, POST, and PUT Request. I also learned the backend architecture which comprised of Model, Controller, and Route. Beside Frontend and Backend, I got the opportunity to help in designing the UI/UX using Figma. I also got the opportunity to integrate the Frontend and Backend code by utilizing asynchronous JavaScript (await and fetch). All these I just learned from these 14 weeks. I would say this is a steep learning curve, but I am very satisfied with the achievement I have created.

Point 2: Project Management

Beside technical engineering skills, I also got the opportunity to lead the team. Leading a team is not as easy as splitting the task and wait for everyone to finish. Leading a team, especially in software development, needs some proper management. One of the popular software management methods is Agile methodology. Agile is a methodology process in which we divide the phases into smaller increments: plan, design, code, deploy, and review. Then we iterate all these processes over and over. This process is effective when we want to deliver features in a short period of time. Implementing this process in the DIP project is not an easy thing. When all the team members are new to this process, sometimes, we are off the path. But I am very grateful that we have implemented this process, which helps us to stay mostly on the track. It also makes us easier to track and pinpoint the weaknesses and faults in our team. With that, we can quickly fix and recover from the previous weakness. As a leader, I am very thankful to my team for giving me this opportunity and responsibility in leading the team.